

REMARKS

Reconsideration and allowance are respectfully requested based on the following remarks. Claims 1, 2, 4-14, 16-18, and 24-30 remain pending. Claim 11 is amended.

Interview Summary

Applicants' representative wishes to thank Examiners Tran and Bella for the personal interview conducted on July 28, 2004. During the interview, the pending claims were discussed with respect to the sole asserted reference (Chatterjee, U.S. Patent No. 6,549,675). Based on that discussion, Examiner Bella agreed that claims 5 and 9 are allowable over Chatterjee. As for the remaining independent claims, Examiner Bella decided to await Applicants' present written response, particularly with regard to Applicants' explanation of pen tip instances with respect to Chatterjee. Accordingly, such an explanation is provided herein.

The Claim Rejections

All of the pending claims, claims 1, 2, 4-14, 16-18, and 24-30 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,549,675 to Chatterjee ("Chatterjee"). Applicants respectfully traverse all rejections.

Pen Tip Instances

According to the illustrative embodiment discussed in the specification on pages 13 and 14, when a user draws a stroke, an ink rendering system may receive a new pen tip position. (See, e.g., specification, p. 13, para. 41). A pen tip position may be sampled according to the position of a stylus upon a digitizer. (*Id.*). Thus, a pen tip position is simply the point location of

the tip of the stylus, *e.g.*, defined by (x,y) coordinates. (*See, e.g.*, specification, p. 2, para. 3; p. 29, para. 69).

Once a new pen tip position is captured and received, the ink rendering system may determine an area, and/or contour that outlines and defines the area, that is associated with the pen tip at the new position. (*See, e.g.*, specification, p. 14, para. 42). This area, which is known as a “pen tip instance,” is based on the size and/or shape of a virtual pen tip. (*Id.*). The virtual pen tip is associated with the stylus and may be of any size and shape, such as a circle, rectangle, or any other shape. (*See, e.g.*, specification, p. 14, para. 42).

Thus, the pen tip *position* represents the location of the stylus, and the pen tip *instance* represents the area defined by the virtual pen tip for that pen tip position. For example, depending upon the virtual pen tip applied, pen tip instances may be circles, rectangles, or any other shape. (Specification, p. 4, para. 7). Fig. 7 shows, for example, a plurality of circular pen tip instances 701, 702, 703, 704. (Specification, p. 14, para. 42). Fig. 15 shows, for example, a plurality of rectangular pen tip instances 1501, 1502. (Specification, p. 24, para. 61).

Independent Claim 1

Independent claim 1 is directed to a method for rendering a digital ink stroke. The claimed method includes receiving a first pen tip instance; receiving a second pen tip instance; and determining a quadrangle based on the first and second pen tip instances, wherein the first and second pen instances each are associated with data representing at least one of a size, shape, and rotation of the respective pen tip instance.

As discussed during the interview, it appears that the Office Action is attempting to equate the claimed pen tip instances with the ink points of Chatterjee or the shapes of Chatterjee. In the first case, the ink points of Chatterjee are nothing more than that – points. The ink points each simply define a single coordinate without regard to size, shape, or rotation. Thus, there is no data in Chatterjee representing at least one of a size, shape, and rotation of an ink point.

During the interview, Examiner Bella mentioned the inherent size, shape, and rotation of a physical pixel on a computer monitor that might be used with Chatterjee. Applicants submit that this is immaterial, however, to whether Chatterjee has *data* representing at least one of a size, shape and rotation of an ink point. The only data in Chatterjee that represents any property of an ink point whatsoever is data representing the coordinate location of the ink point.

It also appears that the Office Action is attempting to equate the claimed pen tip instances with the shapes of Chatterjee. In particular, Chatterjee discloses replacing a series of ink points with an alphabet of shapes so as to compress the ink to use less storage. (Chatterjee, col. 12, lns. 25-34; lns. 46-64). For the sake of argument, even assuming that the shapes of Chatterjee are pen tip instances (which Applicants do not concede), Chatterjee still fails to teach or suggest determining a quadrangle based on first and second pen tip instances, as recited in claim 1. Even if the shapes themselves may be quadrangles, Chatterjee nevertheless does not teach or suggest determining a quadrangle shape based on other *shapes*. To the contrary, the shapes of Chatterjee are based only on the *original ink points* drawn by the user. Thus, applying the Office Action's attempted comparison of the claimed pen tip instances with the shapes of Chatterjee, Chatterjee

fails to teach or suggest determining a quadrangle based on first and second pen tip instances, as recited in claim 1.

For at least these reasons, Applicants submit that claim 1 is allowable over Chatterjee.

Independent Claims 5 and 9

As previously mentioned, during the interview Examiner Bella agreed that Chatterjee does not teach or suggest the subject matter recited in either of claims 5 or 9. Accordingly, it is respectfully submitted that these claims are allowable over Chatterjee.

Independent Claim 11

Independent claim 11 is directed to a method for rendering a digital ink stroke. As amended, the claimed method includes receiving a first pen tip instance; receiving a second pen tip instance; and determining a region connecting the first and second pen tip instances, wherein the first and second pen tip instances are each associated with data representing an area defined by a contour of the respective pen tip instance. In this case, each of the claimed pen tip instances cannot be an original ink point of Chatterjee, because an original ink point itself does not define a contour. A point is, after all, merely a point. Even considering Examiner Bella's concern about the physical pixels on the computer monitor having an inherent area and embodying ink points, Chatterjee still fails to teach or suggest *data* representing an area defined by a contour of an ink point. As discussed previously with regard to claim 1, the only data in Chatterjee that represents any property of an ink point whatsoever is data representing the coordinate location of the ink point.

Also, where the Examiner attempts to compare the claimed pen tip instances with the shapes of Chatterjee, Chatterjee fails to teach or suggest determining a region connecting first and second shapes. Thus, under any comparison asserted in the Office Action, Chatterjee fails to teach or suggest determining a region connecting first and second pen tip instances, wherein the first and second pen tip instances each have an area defined by a contour.

For at least these reasons, it is submitted that claim 11 is allowable over Chatterjee.

Independent Claim 12

Independent claim 12 is directed to a method for rendering a digital ink stroke. The claimed method includes receiving a first pen tip instance; receiving a second pen tip instance; determining a plurality of quadrangles based on the first and second pen tip instances; and determining a union of the plurality of quadrangles.

Chatterjee discloses replacing a series of ink points with shapes, but fails to teach or suggest that a *plurality* of shapes are based on the *same two* ink points. Therefore, Chatterjee does not teach or suggest determining a plurality of quadrangles based on first and second pen tip instances as claimed.

Also, Chatterjee simply fails to teach or suggest determining a *union* of a plurality of quadrangles, as recited in claim 12 (or a union of a plurality of any shapes, for that matter). The Office Action refers to Chatterjee at col. 12, lns. 50-55, but this paragraph merely lists the types of shapes that are available and that a stream of points is replaced with a shape. Nor does any other portion of Chatterjee teach, or even suggest, this claimed feature.

For at least these reasons, it is submitted that claim 12 is allowable over Chatterjee.

Independent Claim 16

Independent claim 16 is directed to an apparatus for dynamically rendering a digital ink stroke, the apparatus coupled to a graphics toolbox. The apparatus of claim 16 includes a second portion coupled to a first portion and configured to generate a first pen tip instance associated with a first pen tip position, a second pen tip instance associated with a second pen tip position, and a quadrangle connecting the first and second pen tip instances, and to forward the first pen tip instance, the second pen tip instance, and the quadrangle to the graphics toolbox.

The claim thus requires that three items are forwarded to the graphics toolbox: the first pen tip instance, the second pen tip instance, and the quadrangle. However, Chatterjee fails to teach or suggest forwarding *all three* items to a graphics toolbox.

Chatterjee discloses compressing ink by replacing a series of original ink points with a series of shapes, and storing the series of shapes. When the compressed ink is later displaying, the stored series of shapes (instead of the ink points) are displayed. Assuming for the sake of argument that Chatterjee uses a graphics toolbox (which is not conceded), only the shapes of the compressed ink would be sent; the original ink points would not be sent in addition to the shapes. That is the whole point of Chatterjee: to replace ink points with shapes and discard the original ink points. Thus, where the compressed ink is displayed, Chatterjee fails to teach or suggest sending a quadrangle *and* first and second pen tip instances to a graphics toolbox as claimed.

Where the original ink points might be sent prior to compression, only the original ink points would be sent, and not the shapes. Thus, where the original ink points are displayed,

Chatterjee also fails to teach or suggest sending first and second pen tip instances *and* a quadrangle to a graphics toolbox as claimed.

Therefore, at best, and assuming Chatterjee even uses a graphics toolbox (again, not conceded), then either the original ink points or the shapes would be sent. However, Chatterjee would never send both.

For at least these reasons, it is submitted that claim 16 is allowable over Chatterjee.

Dependent Claims

Applicants respectfully submit that dependent claims 2, 4-10, 13, 14, 17, and 18 are also allowable over Chatterjee for at least those reasons set forth above with regard to their respective independent claims, and further in view of the additional features recited therein.

For example, claim 17 further recites that the graphics toolbox of claim 16 is configured to fill the first pen tip instance, the second pen tip instance, and the connecting quadrangle, and that a display coupled to the graphics toolbox is configured to display the filled first pen tip instance, the filled second pen tip instance, and the filled connecting quadrangle. However, the ink points of Chatterjee (which the Office Action compares with the claimed pen tip instances) cannot possibly be filled; they are mere points.

Conclusion

All of the rejections having been addressed, Applicants respectfully submit that the application is in condition for allowance, and notification of the same is requested. Should the Examiner have any questions regarding this matter, the Examiner is encouraged to contact the undersigned at the number listed below.

Respectfully submitted,

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